Goal 1: Increase quality and years of healthy life

One of the overarching goals of *Healthy People 2010* is to increase the quality and years of healthy life.[1] This goal targets not only an absolute increase in life expectancy, but also an improvement in the proportion of years lived in good health. Summary measures of population health, defined as "measures that combine both mortality and morbidity data to represent overall population health in a single number", are being evaluated as statistics that can be used to monitor success in achieving this goal.[2]

The analysis presented here uses a health-adjusted life expectancy measure (HLE) that combines total mortality and a univariate measure of morbidity using methods described in detail elsewhere.[3-5] The abridged life table technique presents the most complete statistical description of life expectancy (LE) for a single year in California, and uses mortality data extracted from the Death Statistical Master File and population data that have been updated to include the 2000 Census developed by the California Department of Finance.[6-9] Since this technique does not distinguish between healthy and unhealthy years of life, age-specific prevalence rates of varying levels of health status derived from the California Health Interview Survey (CHIS) are used to calculate an average number of years of healthy life remaining at each age interval.[10,11]

Table 1-A provides an abridged life table for the total population of California by selected age intervals. These data show that in 2001 life expectancy (LE) at birth (e_x, column 10) was 78.8 years, at age 30 LE was 50.1 years, and at 65 the expected number of years of life remaining was 19.2 years.

Examined by gender, Table 1-B shows female LE at birth was 81.2 years, at age 30 was 52.1 years, and at age 65 was 20.4 years. Table 1-C provides an abridged life table for males, and shows their LE at birth was 76.4 years, at age 30 was 47.9 years, and at age 65 was 17.7 years.

In Table 2-A, healthy life expectancy (HLE) for the total population was calculated using respondent-assessed health status statistics obtained from the CHIS ($_5\pi_x$, column 4 - the proportion of survey respondents who rated their general health as either "fair" or "poor"; ($1-_5\pi_x$), column 5 - the proportion of respondents who rated their general health as "excellent", "very good", or "good"). Whereas the total LE at birth from Table 1 was 78.8 years, expected life lived in good or better health (HLE) from Table 2-A was 65.0 years – a difference of 13.8 years. Similarly, at age 30 LE was 50.1 years and HLE was 39.3 years – a difference of 10.8 years; at age 65 LE was 19.2 years and HLE was 13.5 years – a difference of 5.7 years of life remaining that would be lived in fair-poor health.

Examined by gender, Table 2-B shows female HLE at birth was 66.2 years – a difference of 15.0 years from their LE shown in Table 1-B. For males, HLE at birth was 63.8 years – a difference of 12.6 years from their LE shown in Table 1-

C. Again, the differences between LE and HLE indicate that these years would be lived in an unhealthy state: at age 30, that difference was 11.9 years for females and 9.6 years for males; at age 65, that difference was 6.1 years for females and 5.1 years for males.

Goal 2: Eliminate health disparities

The second goal of *Healthy People 2010* is to eliminate health disparities among different segments of the population.[1] Table 4 presents the results from a statistical test for gender disparity in healthy life expectancies, and Figure 1 graphically displays this disparity at each age interval. The HLE and corresponding standard errors are given in columns 2-5 of Table 4 (NOTE: for computational convenience, the variance and standard errors of the age-specific prevalence rates shown in this table were calculated using a simple random sampling assumption which does not take into account the multistage sample design used by the CHIS). Column 6 shows the difference in HLE between females and males, and the approximate standard error is shown in column 7. The z-score statistic is shown in column 8, and ranges from 7.47 for age group 70-74 to 2.51 for ages 85 years and over. Since the critical value of the z-score for a two-tailed test at the 99 percent level of significance is 3.29, test results indicate that the differences in HLE between females and males are statistically significant at this level ($p<0.001$) for all ages except 85 years and over ($p<0.020$).

Although reductions in mortality rates increase life expectancy, healthy life as a proportion of total life decreases as mortality declines.[12] This is consistent with the observation that reductions in mortality are often characterized by the survival of people in poor health who formerly would have died.[13] Reductions in morbidity rates, on the other hand, can increase both the number of healthy years and the proportion of life remaining that is healthy – so reducing morbidity in isolation of any changes in mortality does not have any impact on life expectancy. These conclusions were true regardless of the age groups affected by reductions in either mortality or morbidity.[2]

For more information on life tables and healthy life expectancy, visit the NCHS Web site at:

http://www.cdc.gov/nchs/hphome.htm

For more information on Healthy People 2010 goals, please visit:

http://www.healthypeople.gov/

For more information on the California Health Interview Survey, please visit:

http://www.chis.ucla.edu/default.asp

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Table 1-A. Abridged Life Table - Total Population, California 2001

Age Interval	Population[1]	Number of deaths[2]	Age-specific death rate per 1,000	Proportion of years lived by those who died in age interval[3-5]	Probability of dying during age interval	Number alive at beginning of age interval	Total number of years lived in age interval	Number of years lived in this and subsequent age intervals	Life expectancy at beginning of age interval
x to x+5	${}_5P_x$	${}_5D_x$	${}_5M_x$	a_x	${}_5q_x$	l_x	${}_5L_x$	T_x	e_x
<1 year	518,927	2,863	5.5172	0.179	0.0055	100,000	99,549	7,882,777	78.8
1-4	1,960,105	560	0.2857	0.394	0.0011	99,451	397,528	7,783,228	78.3
5-9	2,686,216	375	0.1396	0.465	0.0007	99,337	496,500	7,385,700	74.3
10-14	2,691,111	420	0.1561	0.557	0.0008	99,268	496,168	6,889,200	69.4
15-19	2,516,412	1,463	0.5814	0.592	0.0029	99,190	495,365	6,393,032	64.5
20-24	2,440,407	2,056	0.8425	0.496	0.0042	98,902	493,465	5,897,667	59.6
25-29	2,524,104	1,983	0.7856	0.511	0.0039	98,487	491,489	5,404,202	54.9
30-34	2,760,420	2,511	0.9096	0.530	0.0045	98,101	489,456	4,912,712	50.1
35-39	2,817,086	3,827	1.3585	0.535	0.0068	97,655	486,739	4,423,257	45.3
40-44	2,749,188	5,657	2.0577	0.537	0.0102	96,994	482,671	3,936,517	40.6
45-49	2,431,183	7,729	3.1791	0.535	0.0158	96,001	476,482	3,453,846	36.0
50-54	2,121,570	9,931	4.6810	0.528	0.0231	94,486	467,269	2,977,365	31.5
55-59	1,570,196	10,852	6.9112	0.534	0.0340	92,299	454,176	2,510,096	27.2
60-64	1,204,278	12,893	10.7060	0.533	0.0522	89,160	434,938	2,055,920	23.1
65-69	1,006,297	16,801	16.6959	0.529	0.0803	84,504	406,526	1,620,982	19.2
70-74	913,825	23,444	25.6548	0.528	0.1209	77,716	366,377	1,214,455	15.6
75-79	795,774	32,475	40.8093	0.520	0.1858	68,317	311,122	848,078	12.4
80-84	545,376	35,807	65.6556	0.514	0.2831	55,620	239,859	536,956	9.7
85 >	477,265	64,051	134.2043	0.497	1.0000	39,872	297,097	297,097	7.5

NOTES:

[1] California Department of Finance, *Population Projections for California and Its Counties 2000-2050*, May 2004.

[2] California Department of Health Services, *Abridged Life Tables for California 2000*, June 2002.

[3] Molla, M.T., Wagener, D.K., and Madans, J.H. *Summary measures of population health: Methods for calculating Healthy Life Expectancy (HLE)*. Healthy People 2010 Statistical Notes, No. 21. Hyattsville, MD: National Center for Health Statistics, August 2001.

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[6] California Department of Health Services, California Health Interview Survey, 2001.

Table 1-B. Abridged Life Table - Female Population, California 2001

Age Interval	Population[1]	Number of deaths[2]	Age-specific death rate per 1,000	Proportion of years lived by those who died in age interval[3-5]	Probability of dying during age interval	Number alive at beginning of age interval	Total number of years lived in age interval	Number of years lived in this and subsequent age intervals	Life expectancy at beginning of age interval
x to x+5	${}_5P_x$	${}_5D_x$	${}_5M_x$	a_x	${}_5q_x$	l_x	${}_5L_x$	T_x	e_x
<1 year	254,186	1,286	5.0593	0.184	0.0050	100,000	99,589	8,118,002	81.2
1-4	957,239	230	0.2403	0.394	0.0010	99,496	397,753	8,018,413	80.6
5-9	1,309,870	165	0.1260	0.455	0.0006	99,401	496,832	7,620,661	76.7
10-14	1,312,244	184	0.1402	0.584	0.0007	99,338	496,545	7,123,828	71.7
15-19	1,212,869	384	0.3166	0.535	0.0016	99,268	495,977	6,627,283	66.8
20-24	1,159,557	482	0.4157	0.500	0.0021	99,111	495,042	6,131,306	61.9
25-29	1,221,779	528	0.4322	0.516	0.0022	98,906	494,011	5,636,264	57.0
30-34	1,341,837	764	0.5694	0.537	0.0028	98,692	492,810	5,142,252	52.1
35-39	1,381,234	1,322	0.9571	0.557	0.0048	98,411	491,016	4,649,442	47.2
40-44	1,364,469	2,024	1.4834	0.540	0.0074	97,942	488,041	4,158,426	42.5
45-49	1,226,777	2,829	2.3060	0.532	0.0115	97,218	483,477	3,670,385	37.8
50-54	1,081,694	3,880	3.5870	0.531	0.0178	96,103	476,508	3,186,908	33.2
55-59	808,664	4,297	5.3137	0.538	0.0262	94,393	466,243	2,710,400	28.7
60-64	628,786	5,339	8.4910	0.535	0.0416	91,916	450,676	2,244,157	24.4
65-69	538,367	7,376	13.7007	0.534	0.0664	88,089	426,809	1,793,481	20.4
70-74	505,585	10,747	21.2566	0.531	0.1012	82,242	391,666	1,366,672	16.6
75-79	460,995	15,877	34.4407	0.526	0.1592	73,916	341,688	975,006	13.2
80-84	328,231	18,733	57.0726	0.522	0.2511	62,148	273,421	633,318	10.2
85 >	321,499	41,577	129.3223	0.516	1.0000	46,543	359,897	359,897	7.7

Table 1-C. Abridged Life Table - Male Population, California 2001

Age Interval	Population[1]	Number of deaths[2]	Age-specific death rate per 1,000	Proportion of years lived by those who died in age interval[3-5]	Probability of dying during age interval	Number alive at beginning of age interval	Total number of years lived in age interval	Number of years lived in this and subsequent age intervals	Life expectancy at beginning of age interval
x to x+5	${}_5P_x$	${}_5D_x$	${}_5M_x$	a_x	${}_5q_x$	l_x	${}_5L_x$	T_x	e_x
<1 year	264,741	1,577	5.9568	0.176	0.0059	100,000	99,511	7,638,973	76.4
1-4	1,002,866	330	0.3291	0.395	0.0013	99,407	397,313	7,539,461	75.8
5-9	1,376,346	210	0.1526	0.472	0.0008	99,276	496,183	7,142,149	71.9
10-14	1,378,867	236	0.1712	0.535	0.0009	99,201	495,807	6,645,966	67.0
15-19	1,303,543	1,079	0.8277	0.611	0.0041	99,116	494,784	6,150,159	62.1
20-24	1,280,850	1,574	1.2289	0.496	0.0061	98,706	492,007	5,655,375	57.3
25-29	1,302,325	1,455	1.1172	0.509	0.0056	98,102	489,168	5,163,368	52.6
30-34	1,418,583	1,747	1.2315	0.526	0.0061	97,555	486,358	4,674,200	47.9
35-39	1,435,852	2,505	1.7446	0.524	0.0087	96,956	482,777	4,187,842	43.2
40-44	1,384,719	3,633	2.6236	0.536	0.0130	96,114	477,662	3,705,065	38.5
45-49	1,204,406	4,900	4.0684	0.537	0.0202	94,861	469,881	3,227,403	34.0
50-54	1,039,876	6,051	5.8190	0.526	0.0287	92,949	458,422	2,757,522	29.7
55-59	761,532	6,555	8.6076	0.531	0.0422	90,282	442,480	2,299,100	25.5
60-64	575,492	7,554	13.1262	0.533	0.0637	86,473	419,506	1,856,620	21.5
65-69	467,930	9,425	20.1419	0.525	0.0961	80,966	386,355	1,437,114	17.7
70-74	408,240	12,697	31.1018	0.526	0.1448	73,184	340,807	1,050,760	14.4
75-79	334,779	16,598	49.5790	0.514	0.2212	62,585	279,281	709,952	11.3
80-84	217,145	17,074	78.6295	0.507	0.3293	48,738	204,111	430,671	8.8
85 >	155,766	22,474	144.2805	0.462	1.0000	32,689	226,561	226,561	6.9

Table 2-A. Healthy Life Expectancy - Total Population, California 2001

Age Interval	Number alive at beginning of age interval	Total number of years lived in age interval	Proportion of persons in age interval considered unhealthy[6]	Proportion of persons in age interval considered healthy[6]	Number of healthy years lived in age interval	Number of healthy years lived in this and all subsequent age intervals	Average number of healthy years remaining at beginning of age interval
x to x+5	l_x	${}_5L_x$	${}_5\pi_x$	$(1-{}_5\pi_x)$	${}_5L'_x$	T'_x	e'_x
<1 year	100,000	99,549	0.0535	0.9465	94,223	6,500,189	65.0
1-4	99,451	397,528	0.0740	0.9260	368,111	6,405,966	64.4
5-9	99,337	496,500	0.0709	0.9291	461,299	6,037,855	60.8
10-14	99,268	496,168	0.1077	0.8923	442,731	5,576,556	56.2
15-19	99,190	495,365	0.1285	0.8715	431,711	5,133,826	51.8
20-24	98,902	493,465	0.1332	0.8668	427,735	4,702,115	47.5
25-29	98,487	491,489	0.1407	0.8593	422,337	4,274,380	43.4
30-34	98,101	489,456	0.1354	0.8646	423,183	3,852,043	39.3
35-39	97,655	486,739	0.1410	0.8590	418,109	3,428,860	35.1
40-44	96,994	482,671	0.1535	0.8465	408,581	3,010,751	31.0
45-49	96,001	476,482	0.1742	0.8258	393,479	2,602,170	27.1
50-54	94,486	467,269	0.2064	0.7936	370,825	2,208,691	23.4
55-59	92,299	454,176	0.2049	0.7951	361,115	1,837,866	19.9
60-64	89,160	434,938	0.2350	0.7650	332,728	1,476,751	16.6
65-69	84,504	406,526	0.2426	0.7574	307,903	1,144,023	13.5
70-74	77,716	366,377	0.2511	0.7489	274,380	836,120	10.8
75-79	68,317	311,122	0.3147	0.6853	213,212	561,740	8.2
80-84	55,620	239,859	0.3445	0.6555	157,228	348,528	6.3
85 >	39,872	297,097	0.3561	0.6439	191,301	191,301	4.8

Table 2-B. Healthy Life Expectancy - Female Population, California 2001

Age Interval	Number alive at beginning of age interval	Total number of years lived in age interval	Proportion of persons in age interval considered unhealthy[6]	Proportion of persons in age interval considered healthy[6]	Number of healthy years lived in age interval	Number of healthy years lived in this and all subsequent age intervals	Average number of healthy years remaining at beginning of age interval
x to x+5	l_x	${}_5L_x$	${}_5\pi_x$	$(1-{}_5\pi_x)$	${}_5L'_x$	T'_x	e'_x
<1 year	100,000	99,589	0.0570	0.9430	93,912	6,615,861	66.2
1-4	99,496	397,753	0.0727	0.9273	368,836	6,521,948	65.5
5-9	99,401	496,832	0.0663	0.9337	463,892	6,153,112	61.9
10-14	99,338	496,545	0.1192	0.8808	437,357	5,689,220	57.3
15-19	99,268	495,977	0.1344	0.8656	429,318	5,251,863	52.9
20-24	99,111	495,042	0.1375	0.8625	426,974	4,822,545	48.7
25-29	98,906	494,011	0.1289	0.8711	430,333	4,395,571	44.4
30-34	98,692	492,810	0.1446	0.8554	421,550	3,965,238	40.2
35-39	98,411	491,016	0.1576	0.8424	413,632	3,543,688	36.0
40-44	97,942	488,041	0.1651	0.8349	407,465	3,130,056	32.0
45-49	97,218	483,477	0.1855	0.8145	393,792	2,722,591	28.0
50-54	96,103	476,508	0.2240	0.7760	369,771	2,328,799	24.2
55-59	94,393	466,243	0.2280	0.7720	359,940	1,959,028	20.8
60-64	91,916	450,676	0.2461	0.7539	339,765	1,599,089	17.4
65-69	88,089	426,809	0.2761	0.7239	308,967	1,259,324	14.3
70-74	82,242	391,666	0.2500	0.7500	293,750	950,357	11.6
75-79	73,916	341,688	0.3096	0.6904	235,901	656,608	8.9
80-84	62,148	273,421	0.3248	0.6752	184,614	420,707	6.8
85 >	46,543	359,897	0.3440	0.6560	236,092	236,092	5.1

Table 2-C. Healthy Life Expectancy - Male Population, California 2001

Age Interval	Number alive at beginning of age interval	Total number of years lived in age interval	Proportion of persons in age interval considered unhealthy[6]	Proportion of persons in age interval considered healthy[6]	Number of healthy years lived in age interval	Number of healthy years lived in this and all subsequent age intervals	Average number of healthy years remaining at beginning of age interval
x to x+5	l_x	${}_5L_x$	${}_5\pi_x$	$(1-{}_5\pi_x)$	${}_5L'_x$	T'_x	e'_x
<1 year	100,000	99,511	0.0503	0.9497	94,506	6,381,003	63.8
1-4	99,407	397,313	0.0752	0.9248	367,435	6,286,497	63.2
5-9	99,276	496,183	0.0752	0.9248	458,870	5,919,063	59.6
10-14	99,201	495,807	0.0958	0.9042	448,308	5,460,193	55.0
15-19	99,116	494,784	0.1229	0.8771	433,975	5,011,884	50.6
20-24	98,706	492,007	0.1292	0.8708	428,440	4,577,909	46.4
25-29	98,102	489,168	0.1529	0.8471	414,374	4,149,469	42.3
30-34	97,555	486,358	0.1266	0.8734	424,785	3,735,095	38.3
35-39	96,956	482,777	0.1241	0.8759	422,865	3,310,310	34.1
40-44	96,114	477,662	0.1415	0.8585	410,073	2,887,446	30.0
45-49	94,861	469,881	0.1623	0.8377	393,619	2,477,373	26.1
50-54	92,949	458,422	0.1865	0.8135	372,926	2,083,753	22.4
55-59	90,282	442,480	0.1793	0.8207	363,143	1,710,827	18.9
60-64	86,473	419,506	0.2212	0.7788	326,711	1,347,684	15.6
65-69	80,966	386,355	0.2028	0.7972	308,002	1,020,973	12.6
70-74	73,184	340,807	0.2500	0.7500	255,605	712,971	9.7
75-79	62,585	279,281	0.3238	0.6762	188,850	457,366	7.3
80-84	48,738	204,111	0.3711	0.6289	128,365	268,516	5.5
85 >	32,689	226,561	0.3814	0.6186	140,150	140,150	4.3

Table 3-A. Variance and standard error of healthy life expectancy assuming simple random sampling
Total Population - California, 2001

Age Interval	Total number of years lived in age interval	Average number of years of healthy life remaining at beginning of age interval	Number of persons in survey in age interval	Proportion of persons in age interval considered healthy[6]	Variance of the prevalence rates in age interval	Variance of healthy life expectancy in age interval	Standard error of healthy life expectancy in age interval
x to x+5	${}_5L_x$	e'x	${}_5N_x$	$(1-{}_5\pi_x)$	$S^2({}_5\pi_x)$	$VAR(e'_x)$	$s(e'_x)$
<1 year	99,549	65.0	961	0.9465	0.000053	0.01337	0.116
1-4	397,528	64.4	3,772	0.9260	0.000018	0.01346	0.116
5-9	496,500	60.8	5,268	0.9291	0.000013	0.01320	0.115
10-14	496,168	56.2	5,520	0.8923	0.000017	0.01291	0.114
15-19	495,365	51.8	3,964	0.8715	0.000028	0.01249	0.112
20-24	493,465	47.5	3,044	0.8668	0.000038	0.01186	0.109
25-29	491,489	43.4	4,087	0.8593	0.000030	0.01100	0.105
30-34	489,456	39.3	5,183	0.8646	0.000023	0.01035	0.102
35-39	486,739	35.1	5,885	0.8590	0.000021	0.00988	0.099
40-44	482,671	31.0	6,395	0.8465	0.000020	0.00949	0.097
45-49	476,482	27.1	5,844	0.8258	0.000025	0.00918	0.096
50-54	467,269	23.4	5,482	0.7936	0.000030	0.00885	0.094
55-59	454,176	19.9	4,093	0.7951	0.000040	0.00850	0.092
60-64	434,938	16.6	3,329	0.7650	0.000054	0.00808	0.090
65-69	406,526	13.5	2,924	0.7574	0.000063	0.00757	0.087
70-74	366,377	10.8	2,887	0.7489	0.000065	0.00723	0.085
75-79	311,122	8.2	2,466	0.6853	0.000087	0.00748	0.086
80-84	239,859	6.3	1,617	0.6555	0.000140	0.00854	0.092
85 >	297,097	4.8	1,100	0.6439	0.000208	0.01157	0.108

Table 3-B. Variance and standard error of healthy life expectancy assuming simple random sampling
Female Population - California, 2001

Age Interval	Total number of years lived in age interval	Average number of years of healthy life remaining at beginning of age interval	Number of persons in survey in age interval	Proportion of persons in age interval considered healthy[6]	Variance of the prevalence rates in age interval	Variance of healthy life expectancy in age interval	Standard error of healthy life expectancy in age interval
x to x+5	${}_5L_x$	e'x	${}_5N_x$	$(1-{}_5\pi_x)$	$S^2({}_5\pi_x)$	VAR(e'$_x$)	s(e'$_x$)
<1 year	99,589	66.2	466	0.9430	0.000115	0.02606	0.161
1-4	397,753	65.5	1,898	0.9273	0.000036	0.02621	0.162
5-9	496,832	61.9	2,550	0.9337	0.000024	0.02569	0.160
10-14	496,545	57.3	2,663	0.8808	0.000039	0.02512	0.158
15-19	495,977	52.9	2,038	0.8656	0.000057	0.02416	0.155
20-24	495,042	48.7	1,642	0.8625	0.000072	0.02281	0.151
25-29	494,011	44.4	2,350	0.8711	0.000048	0.02110	0.145
30-34	492,810	40.2	3,032	0.8554	0.000041	0.01999	0.141
35-39	491,016	36.0	3,480	0.8424	0.000038	0.01908	0.138
40-44	488,041	32.0	3,631	0.8349	0.000038	0.01831	0.135
45-49	483,477	28.0	3,381	0.8145	0.000045	0.01762	0.133
50-54	476,508	24.2	3,149	0.7760	0.000055	0.01690	0.130
55-59	466,243	20.8	2,402	0.7720	0.000073	0.01612	0.127
60-64	450,676	17.4	1,962	0.7539	0.000095	0.01511	0.123
65-69	426,809	14.3	1,733	0.7239	0.000115	0.01398	0.118
70-74	391,666	11.6	1,732	0.7500	0.000108	0.01293	0.114
75-79	341,688	8.9	1,567	0.6904	0.000136	0.01297	0.114
80-84	273,421	6.8	1,067	0.6752	0.000206	0.01422	0.119
85 >	359,897	5.1	739	0.6560	0.000305	0.01826	0.135

Table 3-C. Variance and standard error of healthy life expectancy assuming simple random sampling
Male Population - California, 2001

Age Interval	Total number of years lived in age interval	Average number of years of healthy life remaining at beginning of age interval	Number of persons in survey in age interval	Proportion of persons in age interval considered healthy[6]	Variance of the prevalence rates in age interval	Variance of healthy life expectancy in age interval	Standard error of healthy life expectancy in age interval
x to x+5	${}_5L_x$	e'x	${}_5N_x$	$(1-{}_5\pi_x)$	$S^2({}_5\pi_x)$	$VAR(e'_x)$	$s(e'_x)$
<1 year	99,511	63.8	495	0.9497	0.000097	0.02787	0.167
1-4	397,313	63.2	1,874	0.9248	0.000037	0.02810	0.168
5-9	496,183	59.6	2,718	0.9248	0.000026	0.02758	0.166
10-14	495,807	55.0	2,857	0.9042	0.000030	0.02699	0.164
15-19	494,784	50.6	1,926	0.8771	0.000056	0.02627	0.162
20-24	492,007	46.4	1,402	0.8708	0.000080	0.02508	0.158
25-29	489,168	42.3	1,737	0.8471	0.000075	0.02338	0.153
30-34	486,358	38.3	2,151	0.8734	0.000051	0.02176	0.148
35-39	482,777	34.1	2,405	0.8759	0.000045	0.02074	0.144
40-44	477,662	30.0	2,764	0.8585	0.000044	0.01997	0.141
45-49	469,881	26.1	2,463	0.8377	0.000055	0.01938	0.139
50-54	458,422	22.4	2,333	0.8135	0.000065	0.01878	0.137
55-59	442,480	18.9	1,691	0.8207	0.000087	0.01823	0.135
60-64	419,506	15.6	1,367	0.7788	0.000126	0.01759	0.133
65-69	386,355	12.6	1,191	0.7972	0.000136	0.01668	0.129
70-74	340,807	9.7	1,155	0.7500	0.000162	0.01663	0.129
75-79	279,281	7.3	899	0.6762	0.000244	0.01793	0.134
80-84	204,111	5.5	550	0.6289	0.000424	0.02156	0.147
85 >	226,561	4.3	361	0.6186	0.000654	0.03139	0.177

Table 4. Statistical test for disparity in healthy life expectancies at specific ages - California, 2001

Age Interval	Healthy Life Expectancy Female	Standard Error of Healthy Life Expectancy Female	Healthy Life Expectancy Male	Standard Error of Healthy Life Expectancy Male	Difference in Healthy Life Expectancy	Approximate Standard Error of difference in Healthy Life Expectancy	z-statistic	p-value Pr(Z>=z)
x to x+5	$e'_{x,1}$	$s(e'_{x,1})$	$e'_{x,2}$	$s(e'_{x,2})$	(2) - (4)	(3) + (5)	z	p
<1 year	66.2	0.161	63.8	0.167	2.349	0.328	7.15	<0.001
1-4	65.5	0.162	63.2	0.168	2.310	0.330	7.01	<0.001
5-9	61.9	0.160	59.6	0.166	2.280	0.326	6.99	<0.001
10-14	57.3	0.158	55.0	0.164	2.230	0.323	6.91	<0.001
15-19	52.9	0.155	50.6	0.162	2.340	0.318	7.37	<0.001
20-24	48.7	0.151	46.4	0.158	2.279	0.309	7.36	<0.001
25-29	44.4	0.145	42.3	0.153	2.144	0.298	7.19	<0.001
30-34	40.2	0.141	38.3	0.148	1.891	0.289	6.54	<0.001
35-39	36.0	0.138	34.1	0.144	1.867	0.282	6.62	<0.001
40-44	32.0	0.135	30.0	0.141	1.917	0.277	6.93	<0.001
45-49	28.0	0.133	26.1	0.139	1.889	0.272	6.95	<0.001
50-54	24.2	0.130	22.4	0.137	1.814	0.267	6.79	<0.001
55-59	20.8	0.127	18.9	0.135	1.804	0.262	6.89	<0.001
60-64	17.4	0.123	15.6	0.133	1.812	0.256	7.09	<0.001
65-69	14.3	0.118	12.6	0.129	1.686	0.247	6.82	<0.001
70-74	11.6	0.114	9.7	0.129	1.814	0.243	7.47	<0.001
75-79	8.9	0.114	7.3	0.134	1.575	0.248	6.36	<0.001
80-84	6.8	0.119	5.5	0.147	1.260	0.266	4.74	<0.001
85 >	5.1	0.135	4.3	0.177	0.785	0.312	2.51	<0.020

Figure 1.
Gender Disparity in Healthy Life Expectancy
California, 2001